

PATENT COOPERATION TREATY

To:

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PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing (day/month/year)	30 August 2004 (30.08.2004)
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Applicant's or agent's file reference LW8096PC	FOR FURTHER ACTION See paragraph 2 below
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International application No. PCT/KR 2004/000278	International filing date (day/month/year) 12 February 2004 (12.02.2004)	Priority Date (day/month/year) 19 February 2003 (19.02.2003)
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International Patent Classification (IPC) or both national classification and IPC G02F1/13357
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Applicant SAMSUNG ELECTRONICS CO., LTD.
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1. This opinion contains indications relating to the following items:

- ☒ Cont. No. I Basis of the opinion
- ☐ Cont. No. II Priority
- ☐ Cont. No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Cont. No. IV Lack of unity of invention
- ☒ Cont. No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Cont. No. VI Certain documents cited
- ☐ Cont. No. VII Certain defects in the international application
- ☐ Cont. No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/ AT Austrian Patent Office Dresdner Straße 87, A-1200 Vienna Facsimile No. +43 / 1 / 534 24 / 535	Authorized officer GRONAU E. Telephone No. +43 / 1 / 534 24 / 320
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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/KR 2004/000278

Continuation No. I

Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed.

Continuation No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 2,3,7-11	YES
	Claims 1,4-6	NO
Inventive step (IS)	Claims 9-11	YES
	Claims 1-8	NO
Industrial applicability (IA)	Claims 1-11	YES
	Claims ----	NO

2. Citations and explanations:

The following documents are cited in the search report:

- D1 US 5684550 A
- D2 US 2002/0149712 A1
- D3 US 5467208 A
- D4 EP 0677768 A1
- D5 JP 2002 228310 A

Documents D1 to D3 relate to a backlight assembly for liquid crystal display devices comprising a light generating part, a light controlling part and a light condensing part. The light condensing part is integrally formed with the light controlling part so as to condense the controlled light. The light controlling part is a light diffusion plate and the light condensing part is a brightness enhancement sheet. The brightness enhancement sheet disclosed in D1 and D3 consists of a prism sheet. The prism sheet of D1 may have round prism crests (rounded ridges). see col.28. line 47-49.

Therefore, documents D1 to D3 anticipate the subject matter of claims 1, 4 to 6 of the present application in their entirety.

Document D4 relates to a backlight liquid crystal display including a collimated backlight assembly. At the observer's side of the liquid crystal a brightness enhancement film and light diffusing sheet are arranged on a first polarizer. As the brightness enhancement film a prism sheet is used. An index matching adhesive is provided on both sides of the prism sheet so as to adhere the prism sheet to the diffuser and to the polarizer, see page 9, line 3-6. In another embodiment shown in Fig. 1b of D4, the diffuser and the prism facets are integrally formed as one piece.

It is therefore obvious for a person skilled in the art to use an adhesive layer for laminating a diffuser with a brightness enhancement sheet. The subject matter of claims 2 and 7 lacks an inventive step.

Document D5 also relates to backlight liquid crystal display comprising a backlight unit with an diffusion sheet and a liquid crystal display panel. The LCD panel essentially comprises a reflective polarizing film, a lower dichroism polarizing element, a LC layer, a phase retarder and an upper dichroism polarizing element. The lower dichroism polarizing element and the reflective polarizing film are laminated with each other using a pressure sensitive adhesive, preferably a acrylate adhesive, see paragraphs 30 and 32. Therefore, the subject matter of claims 3 and 8 are rendered obvious by combining the disclosure of D1 or D2 with that of D5.

The subject matter of independent claim 9 differs from the state of the art, represented by the cited references, in that a protection sheet is disposed on the brightness enhancement film to prevent breakage of the LCD panel. With regard to this distinguishing feature subject matter of claim 9 is considered novel and to include an inventive step.

Claims 10 and 11 specify preferred embodiments of the subject matter of claim 9 and are considered novel and including an inventive step in combination with claim 9.

Industrial applicability is given for all claims 1-11.